

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2532_S PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/004810	International filing date (<i>day/month/year</i>) 06.05.2004	Priority date (<i>day/month/year</i>) 08.05.2003
International Patent Classification (IPC) or national classification and IPC		
Applicant KNORR-BREMSE SYSTEME FÜR NUTZFAHRZEUGE GMBH		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:

- a. ☒ (*sent to the applicant and to the International Bureau*) a total of 4 sheets, as follows:
- ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
- b. ☐ (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s))

_____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
 - ☐ international search (Rule 12.3 and 23.1(b))
 - ☐ publication of the international application (Rule 12.4)
 - ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 - ☐ the international application as originally filed/furnished
 - ☒ the description:
 - pages 1-16 _____ as originally filed/furnished
 - pages* 1a, 1b _____ received by this Authority on 11.03.2005 with the letter of 09.03.2005
 - pages* _____ received by this Authority on _____
 - ☒ the claims:
 - nos. _____ as originally filed/furnished
 - nos.* _____ as amended (together with any statement) under Article 19
 - nos.* 1-5 _____ received by this Authority on 11.03.2005 with the letter of 09.03.2005
 - nos.* _____ received by this Authority on _____
 - ☒ the drawings:
 - sheets 1/5-5/5 _____ as originally filed/furnished
 - sheets* _____ received by this Authority on _____
 - sheets* _____ received by this Authority on _____
 - ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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International application No.

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement															
1. Statement	<table><tbody><tr><td rowspan="2">Novelty (N)</td><td>Claims <u>1-5</u></td><td>YES</td></tr><tr><td>Claims _____</td><td>NO</td></tr><tr><td rowspan="2">Inventive step (IS)</td><td>Claims <u>1-5</u></td><td>YES</td></tr><tr><td>Claims _____</td><td>NO</td></tr><tr><td rowspan="2">Industrial applicability (IA)</td><td>Claims <u>1-5</u></td><td>YES</td></tr><tr><td>Claims _____</td><td>NO</td></tr></tbody></table>	Novelty (N)	Claims <u>1-5</u>	YES	Claims _____	NO	Inventive step (IS)	Claims <u>1-5</u>	YES	Claims _____	NO	Industrial applicability (IA)	Claims <u>1-5</u>	YES	Claims _____	NO
Novelty (N)	Claims <u>1-5</u>		YES													
	Claims _____	NO														
Inventive step (IS)	Claims <u>1-5</u>	YES														
	Claims _____	NO														
Industrial applicability (IA)	Claims <u>1-5</u>	YES														
	Claims _____	NO														
2. Citations and explanations (Rule 70.7)	<p>This report makes reference to the following document:</p> <p style="text-align: center;">D1: DE 199 15 253 A (BOSCH GMBH ROBERT) 5 October 2000 (2000-10-05)</p> <p>D1, which is considered to represent the prior art closest to the subject matter of claim 1, discloses (the references in parentheses are to this document):</p> <p>A braking system for vehicles (see column 3, lines 5-9, and figure 2) with at least one first braking circuit (microcomputer 1 inside unit 10, together with the wheel brakes controlled by this microcomputer, see column 3, lines 9-16, see also column 4, lines 7-14) and at least one second braking circuit (microcomputer 2 inside unit 10, together with the wheel brakes controlled by this microcomputer), wherein each of the two braking circuits has an electrical open loop, each of which has a control electronics system (10), a dedicated power supply device (E1 or E2, see column 3, line 11 and column 3, line 64 to column 4, line 6) and brake actuating devices (50, 52, 54, 56) controllable by the control electronics systems, wherein at least one brake actuating device is</p>															

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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controllable by more than one control electronics system (in this case, for example, by control electronics systems 58 or 10).

The subject matter of claim 1 differs from the closest prior art (D1) in that the braking circuits are electrically controllable by a service braking system valve, wherein the service braking system valve has two electrical brake sensor devices, each of which is connected to the control electronics systems in a mutually galvanically isolated manner.

The subject matter of claim 6 is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention may therefore be considered that of providing an improved generic braking circuit which is electrically controllable by a service braking system valve.

The solution to this problem proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)). The reasons are:

None of the prior art documents discloses a solution wherein the service braking system valve has two electrical brake sensor devices, each of which is connected to the control electronics systems in a mutually galvanically isolated manner.

Claims 2-5 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and

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inventive step.